

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
)
Amendment of Section 73.622(b),) MM Docket No. 01-
Table of Allotments,) RM-
Digital Television Broadcast Stations)
(Harrisburg, Pennsylvania))

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MAY 14 2001

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: Chief, Video Services Division

PETITION FOR RULEMAKING

Harrisburg Television, Inc. ("Harrisburg Television"), licensee of television station WHTM-TV, NTSC Channel 27, Harrisburg, Pennsylvania, by its undersigned attorneys and pursuant to Sections 1.401 and 73.623 of the Federal Communications Commission's rules, hereby petitions for rulemaking to amend the Digital Television ("DTV") Table of Allotments, 47 C.F.R. § 73.622(b). Specifically, Harrisburg Television requests that the Commission substitute Channel 10 for Channel 57 as the DTV channel assigned to WHTM-DT. Under this proposal, the DTV Table of Allotments would be amended as follows:

<u>Community</u>	<u>Present</u>	<u>Proposed</u>
Harrisburg, Pennsylvania	4, *36, 57	4, 10, *36

For the reasons set forth below, and as demonstrated by the attached Engineering Statement of Cavell, Mertz & Davis, Inc. ("Engineering Statement"), Harrisburg Television submits that the proposed amendment to the DTV Table of Allotments is consistent with the Commission's rules and is in the public interest.

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1. As set forth in the attached Engineering Statement, the proposed DTV channel substitution is fully consistent with the requirements of Section 73.623(c)(1). Specifically, the operation of WHTM-DT on Channel 10 satisfies the Commission's 2%-10% *de minimis* interference test. No analog or DTV station will receive incremental interference exceeding two percent of the population currently served. In addition, the proposed channel change will not result in any new interference to stations already experiencing maximum DTV interference (i.e., interference in excess of ten percent of their current NTSC population), nor will it result in interference that would cause another station to begin experiencing DTV interference to greater than ten percent of the population currently served. Moreover, to the extent such protection is required, there will be no impermissible interference to protected Class A television stations.¹

2. DTV Channel 10 can be allotted to WHTM using the station's authorized NTSC transmitter site in full compliance with the principal community coverage requirements of Section 73.625(a).

3. The proposed channel substitution would benefit the public interest for several reasons. First, implementing WHTM's DTV operation on an "in core channel" would eliminate the need to change DTV channels yet again at the end of the transition period. Harrisburg Television would be able to complete the build-out of its DTV facilities earlier and at less cost, resulting in improved service to the public. The proposed change will also eliminate

¹ Harrisburg Television does not concede that it is necessary to protect Class A television stations from additional interference in a petition for a DTV channel change. Harrisburg Television submits the DTV channel change requested here – substituting a core DTV channel for a non-core channel – represents an appropriate solution to a technical problem that ensures the long-term replication and maximization of WHTM's NTSC service area. Accordingly, Harrisburg Television submits that no Class A protection is required under the Community Broadcasters' Protection Act of 1999. See 47 U.S.C. § 336(f)(1)(D) (2000).

the potential to confuse or frustrate the public by requiring them to find WHTM-DT on a second channel.

4. Second, operation on DTV Channel 10 as opposed to DTV Channel 57 would improve signal coverage for viewers in the Harrisburg DMA. Presently, WHTM-TV operates on NTSC Channel 27. As demonstrated in the Engineering Statement, the proposed operation of WHTM-DT on Channel 10 would achieve a 25 percent increase in interference-free population over that of the current NTSC facility's licensed Grade B contour. Harrisburg Television submits that the public interest would be served by the more efficient use of the broadcast spectrum.

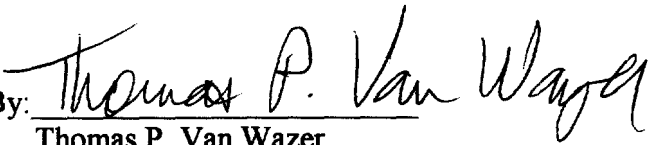
5. Third, Harrisburg Television submits that its proposal to vacate an out-of-core DTV channel is itself in the public interest. As evidenced by the current public policy debate over the appropriate steps the Commission should take to clear channels 60-69, the process of clearing incumbents from reallocated spectrum is exceedingly difficult. The instant proposal serves to make the next round of broadcast spectrum reallocation easier for the Commission. Accordingly, Harrisburg Television submits that this fact alone warrants a finding that the proposed channel change request is in the public interest.

CONCLUSION

For the foregoing reasons, Harrisburg Television respectfully requests that the Commission initiate a rulemaking to substitute DTV Channel 10 for DTV Channel 57 as the digital television channel assigned to Harrisburg Television, Inc., Harrisburg, Pennsylvania.

Respectfully submitted,

Harrisburg Television, Inc.

By: 

Thomas P. Van Wazer
Jennifer Tatel*
Its Attorneys

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Dated: May 14, 2001

* Admitted only in Virginia

Engineering Statement
prepared for
Harrisburg Television, Inc.
WHTM-DT Harrisburg, Pennsylvania
Ch. 10 14 kW (MAX-DA) 346 m

This engineering statement has been prepared on behalf of *Harrisburg Television, Inc.* ("*Harrisburg*"), licensee of WHTM-TV, NTSC Channel 27, Harrisburg, Pennsylvania. In the Commission's Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders on Advanced Television ("*SMO&O*"),¹ DTV Channel 57 was allotted as a "paired" DTV Channel for WHTM-TV. The instant statement supports a *Petition for Rulemaking* on behalf of *Harrisburg* to propose to substitute channel 10 for WHTM-DT.

Discussion

An engineering review of the DTV allotments and NTSC assignments in the region surrounding Harrisburg showed that Channel 10 could be substituted for the Channel 57 DTV allotment. Detailed interference studies were conducted with respect to domestic NTSC and DTV allotments and facilities, in accordance with §73.623(c) (as required in the *SMO&O*). Consideration was given to Low Power Television (LPTV) stations that are listed as eligible for Class A status. The studies showed that DTV Channel 10 could be used for WHTM-DT at 14 kW maximum effective radiated power (ERP) and an antenna height above average terrain (HAAT) of 346 meters. This facility will provide interference-free service to 1,772,660 people, which is 25% greater than the 1,419,917 people served by the current WHTM-TV NTSC facility.

The technical data for the proposed Channel 10 allotment are summarized on the following page. The site specified is the same as that for the WHTM-DT "reference" allotment. The power and height combination shown for the proposed operation on Channel 10 at the "reference" point will avoid impermissible levels of incremental interference to NTSC and DTV stations and Low Power Television (LPTV) stations eligible for Class A status.

¹ See MM Docket 87-268, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, FCC 98-315, released December 18, 1998.

Engineering Statement

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Summary Technical Data for Proposed DTV Channel 10

Coordinates (NAD-27)	40° 18' 57" N-Lat 76° 57' 02" W-Lon
Channel	10
Effective Radiated Power	14 kW (MAX-DA) (See Table 1 for directional antenna relative field azimuth pattern)
Antenna Height	505 m AMSL 346 m HAAT

NTSC and DTV Allocation Considerations

Criteria for evaluating the impact of DTV station proposals were released in the Commission's August 10, 1998 Public Notice entitled "*Additional Application Processing Guidelines for Digital Television.*" In that Public Notice, the Commission's Mass Media Bureau stated that "interference to [NTSC stations and DTV stations and allotments] affecting less than 2 percent of the population they serve is considered to be *de minimis*. However, any interference is considered unacceptable (there is no amount considered to be *de minimis*) if the station to be protected already is receiving interference to more than 10 percent of the population it would otherwise serve...." The same Public Notice states that for DTV proposals, the determination of interference to NTSC and DTV facilities (as calculated per OET Bulletin 69) will be rounded to the nearest tenth of a percent. The August 10, 1998 Public Notice requires that interference criteria as described above and in §73.623(c) be utilized to evaluate proposed DTV channel changes and their impact on other NTSC and DTV stations and allotments.

Accordingly, a study was conducted to evaluate the change in interference to pertinent NTSC and DTV stations and allotments that may be attributed to the proposed Channel 10 facility. A detailed interference study was conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission's Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*,

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July 2, 1997 ("OET-69").² The interference study examined the net change in interference as experienced by NTSC and DTV stations that would result from the proposal.

All stations considered in this study are listed in **Table 2**. As shown in **Table 2**, any increase in interference to NTSC and DTV facilities complies with the Commission's 2%/10% "*de minimis*" guidelines. No interference is predicted to any other NTSC or DTV station or allotment. Thus, this proposal is believed to be in compliance with Commission policy regarding DTV channel changes as they may affect NTSC and DTV stations.

Class A Television

An allocation study of possible conflicts was conducted with respect to LPTV / translator stations that may be eligible for Class A status.³ The study determined that the following LPTV / translator stations are close enough to the proposed DTV Channel 10 allotment facility to warrant detailed review:

²The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard terrain profile step size of 1 km and cell size of 2 km were used. The Longley-Rice computer program input data, following the guidelines established under OET-69, includes a location variability of 50%, a time availability of 10%, a situation variability of 50%, horizontal polarization, 0.005 S/m conductivity, a climate constant of 15, an assumption of a continental temperate climate zone, and a receive antenna height of 10 meters. The service area for each DTV facility under study is that area predicted to receive signal levels of at least 36 dB μ using the Longley-Rice methodology, and within the DTV F(50,90) 36 dB μ contour. In instances where the DTV reference ERP is 3.2 kW, the Grade B contour of the associated analog station (authorized as of April 3, 1997) is used to determine the extent of the DTV station's service area per §73.622(e)(1). The service area for each NTSC facility under study is that area predicted to receive signal levels of at least 56 dB μ using the Longley-Rice methodology, and within the NTSC F(50,50) 56 dB μ contour. Comparisons of various results of this computer program to the Commission's implementation of OET-69 show good correlation.

³The Commission recently created a new class of television stations. See *Establishment of a Class A Television Service*, MM Docket 00-10, FCC 00-115, released April 4, 2000.

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Channel	Call		City		State	Lat	Distance
Applicant/Licensee						Long	Bearing
=====							
9Z	W09BL	LIC	Zn: WILLIAMSPORT		PA	41-13- 8	100.28
PENN CENTRAL BROADCASTING, INC.			0.04 kW			76-57-27	359.67
10-	W10CE	LIC	Zn: CHARLOTTESVILLE		VA	38- 2-25	286.78
THE RECTOR & VISITORS OF UNIV. OF VA			0.12 kW			78-31-17	208.75
10+	WAZT-LP	LIC	Zn: WOODSTOCK		VA	38-50-23	214.37
RUARCH ASSOCIATES LLC			0.16 kW			78-33-32	220.65
10+	WAZT-LP	STA	Zn: WOODSTOCK		VA	38-57-50	196.59
RUARCH ASSOCIATES LLC			1.00 kW			78-25-46	220.70
10+	WAZT-LP	APP	Zn: WOODSTOCK		VA	38-57-50	196.59
RUARCH ASSOCIATES LLC			1.00 kW			78-25-46	220.70
10Z	W10BH	LIC	Zn: JAMESTOWN		NY	42- 7-53	277.27
TRINITY BROADCASTING NETWORK			0.03 kW			79-13-13	317.39
10Z	WBPN-LP	CP MOD	Zn: BINGHAMTON		NY	42- 3-22	210.92
STAINLESS BROADCASTING, L.P.			0.004 kW			75-56-38	23.28
10-	W08CO	CP	Zn: TOWANDA		PA	41-40-52	156.66
WNEP-TV, L.P.			0.13 kW			76-28-55	14.42

From the list above, a study was made to determine which LPTV stations' protected contours are overlapped by the corresponding interfering contour from the proposed WHTM-DT facility, using the criteria of §73.623(c)(5). With respect to interference caused from the various LPTV stations to the proposed WHTM-DT facility, an evaluation was conducted per §73.6013, which would require that an analog Class A station not cause 0.5 percent (or more) interference to a DTV facility's service population. The detailed interference study was conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission's Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, July 2, 1997 ("OET-69").⁴

Contour overlap (that would be prohibited under §73.623) would not occur to any of the stations on the list above. The proposed WHTM-DT facility would not experience interference from

⁴The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard terrain profile step size of 1 km and cell size of 2 km were used. The service area for the proposed WHTM-DT facility is that area predicted to receive signal levels of at least 36 dBμ using the Longley-Rice methodology, and within the DTV F(50,90) 36 dBμ service contour distance as determined per §73.625(b). Comparisons of various results of this computer program to the Commission's implementation of OET-69 show good correlation.

Engineering Statement

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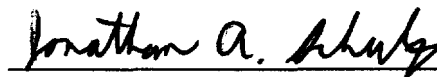
any of the stations on the list above. Nevertheless, if a waiver of any Rule or policy regarding Class A stations is deemed necessary by the staff, then one is respectfully requested on behalf of the applicant for the reasons stated above.

Summary

It is proposed that DTV Channel 10 be allotted to Harrisburg, Pennsylvania as a substitute for Channel 57. The proposed substitution complies with the *de minimis* interference rules with regard to NTSC and DTV facilities. There is no interference conflict with LPTV stations eligible for Class A status.

Certification

Under the penalty of perjury, the undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief. Mr. Schultz is an associate in the firm of *Cavell, Mertz & Davis, Inc.*, holds a Bachelor of Science degree from the University of Rochester in Physics, and has previously submitted engineering exhibits to the Federal Communications Commission. His qualifications are a matter of record with that entity.



Jonathan A. Schultz

May 11, 2001

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Table 1
DIRECTIONAL ANTENNA RELATIVE FIELD PATTERN
 prepared for
Harrisburg Television, Inc.
 WHTM-DT Harrisburg, Pennsylvania
 Ch. 10 14 kW (MAX-DA) 346 m

Azimuth (°T)		Relative Field	Azimuth (°T)		Relative Field
0		0.703	180		0.560
10		0.638	190		0.614
20		0.580	200		0.677
30		0.534	210		0.742
40		0.508	220		0.805
48	<i>minimum</i>	0.503	230		0.862
50		0.503	240		0.910
60		0.516	250		0.948
70		0.537	260		0.975
80		0.560	270		0.993
90		0.578	280		1.000
100		0.586	282	<i>maximum</i>	1.000
102	<i>lobe</i>	0.586	290		0.997
110		0.582	300		0.983
120		0.568	310		0.960
130		0.547	320		0.926
140		0.524	330		0.882
150		0.507	340		0.829
156	<i>minimum</i>	0.503	350		0.768
160		0.504			
170		0.522			

Table 1
INTERFERENCE ANALYSIS RESULTS SUMMARY
 prepared for
Harrisburg Television, Inc.
 WHTM-DT Harrisburg, Pennsylvania
 Ch. 10 14 kW (MAX-DA) 346 m

DTV Facilities

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Calculated "Before" Service Population (2)</u>	<u>Calculated "After" Service Population (3)</u>	<u>--- Net "New" Interference --- ("2 percent" test)</u>		<u>Percentage Reduction of Baseline Population ("10 percent" test) (6)</u>
						<u>Population</u> (4)	<u>Percentage</u> (5)	
WOLF-DT (Ref 3.2 kW)	Hazleton, PA 9	108.5				----- no interference caused by proposal -----		
WOLF-DT (App 6.3 kW)	Hazleton, PA 9	132.7	794,000	1,848,395	1,848,395	0	0.00	0.00
WVXF-DT (PRM 55.0 kW)	Clarksburg, WV 10	311.7				----- no interference caused by proposal -----		
WTNH-DT (Ref 8.6 kW)	New Haven, CT 10	358.8				----- no interference caused by proposal -----		
WTNH-DT (Lic 7.9 kW)	New Haven, CT 10	358.8				----- no interference caused by proposal -----		
WTNH-DT (App 21.0 kW)	New Haven, CT 10	358.8				----- no interference caused by proposal -----		
WOIO-DT (Ref 3.6 kW)	Shaker Heights, OH 10	417.4				----- no interference caused by proposal -----		
WOIO-DT (Lic 3.5 kW)	Shaker Heights, OH 10	417.4				----- no interference caused by proposal -----		
WBRE-DT (CP 2.5 kW)	Wilkes-Barre, PA 11	132.4				----- no interference caused by proposal -----		

Cavell, Mertz & Davis, Inc.

Table 1
INTERFERENCE ANALYSIS RESULTS SUMMARY
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<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Calculated "Before" Service Population (2)</u>	<u>Calculated "After" Service Population (3)</u>	<u>--- Net "New" Interference --- ("2 percent" test)</u>		<u>Percentage Reduction of Baseline Population ("10 percent" test) (6)</u>
						<u>Population (4)</u>	<u>Percentage (5)</u>	
WBRE-DT (App 30.0 kW)	Wilkes-Barre, PA 11	132.4	1,642,000	2,233,312	2,233,163	149	0.01	0.00
WBRE-DT (Ref 3.7 kW)	Wilkes-Barre, PA 11	132.9	1,642,000	1,638,230	1,638,230	0	0.00	0.23

NTSC Facilities

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Calculated "Before" Service Population (2)</u>	<u>Calculated "After" Service Population (3)</u>	<u>--- Net "New" Interference --- ("2 percent" test)</u>		<u>---Total Interference--- from DTV only ("10 percent" test)</u>	
						<u>Population (4)</u>	<u>Percentage (5)</u>	<u>Population (7)</u>	<u>Percentage (8)</u>
WUSA(TV) (Lic)	Washington, DC 9	152.0		----- no interference caused by proposal -----					
WTAJ-TV (Lic)	Altoona, PA 10	129.6	1,038,501	762,407	745,912	16,495	1.59	16,495	1.59
WCAU(TV) (Lic)	Philadelphia, PA 10	149.1	8,556,948	7,148,217	7,019,168	129,049	1.51	145,928	1.71
WHEC-TV (Lic)	Rochester, NY 10	317.5		----- no interference caused by proposal -----					
WTEN(TV) (Lic)	Albany, NY 10	356.8		----- no interference caused by proposal -----					

Table 1
INTERFERENCE ANALYSIS RESULTS SUMMARY
 (Page 3 of 3)

Stations Considered	City, State Channel	Distance (km)	Baseline Population (1)	Calculated “Before” Service Population (2)	Calculated “After” Service Population (3)	--- Net “New” Interference --- (“2 percent” test)		---Total Interference--- from DTV only (“10 percent” test)	
						Population (4)	Percentage (5)	Population (7)	Percentage (8)
WAVY(TV) (Lic)	Portsmouth, VA 10	389.9		----- no interference caused by proposal -----					
WBAL-TV (Lic)	Baltimore, MD 11	111.9	7,266,457	6,531,545	6,528,657	2,888	0.04	78,602	1.08
WBAL-TV (CP)	Baltimore, MD 11	111.9	7,232,430	6,505,295	6,503,615	1,680	0.02	72,987	1.01

- Notes:
- (1) For DTV stations, greater of NTSC or DTV Service Population, from FCC Table
For NTSC stations, total population within noise-limited contour
 - (2) Service population after reduction from terrain and interference losses, before consideration of proposal
 - (3) Service population after reduction from terrain and interference losses, considering proposal
 - (4) Net change in population receiving interference resulting from proposal, equals (2) minus (3). A negative number indicates a *reduction* in interference.
 - (5) Proposal's impact in terms of percentage, equals (4)/(1) times 100 percent: not to exceed *de minimis* limit of 2.0 percent
 - (6) Total interference to DTV stations: equals 100 percent minus [(3)/(1) X 100%]; proposal may not add interference above 10% total. Zero total interference is indicated if (3) is greater than (1).
 - (7) NTSC station total population subject to interference from DTV only sources (considering proposal)
 - (8) Proposal's impact to NTSC station in terms of percentage, equals (7)/(1) times 100 percent; proposal may not add interference above 10% total

The determination of stations for consideration and the determination of baseline population and interference percentages were made as described in the Commission's August 10, 1998 Public Notice "Additional Application Processing Guidelines for Digital Television"